




Form PTO-1449 (Rev. 8-88)		U.S. Department of Commerce Patent and Trademark Office		Attorney Docket No. 84512USC1		Serial No. 10/025,155	
INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)				Applicants Heinz et al.			
				Filing Date December 18, 2001		Group No. Not Yet Assigned	
U.S. PATENT DOCUMENTS							
Examiner Initial*		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
DP		2,041,600	05/19/36	H.T. Friis	—	—	
		2,432,134	12/09/47	V.B. Bagnall	—	—	
		2,540,696	02/06/51	W.J. Smith, Jr.	—	—	
		2,596,966	05/13/52	W.W. Lindsay, Jr.	—	—	
		2,648,000	08/04/53	M.G. White	—	—	
		2,773,254	12/04/56	H.F. Engelmann	—	—	
		2,836,814	05/27/58	J.J. Nail	—	—	
DP		2,868,808	01/17/61	L. Russell	—	—	
FOREIGN PATENT DOCUMENTS							
DP		Document Number/ Acceptance Number	Date	Country	Class	Subclass	Translation Yes No
		AU-B-38746/93; 656857	29/07/93	Australia	—	—	X
		AU-B-41625/93; 664625	20/01/94	Australia	—	—	X
		AU-B-80057/94; 688398	04/05/95	Australia	—	—	X
		DE 3323 234 A1	10/01/85	Germany	—	—	Abstract Only
DP		0 137 562 A2	17/04/85	EPO	—	—	X
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
DP		Variable-Elevation Beam-Aerial Systems for 1 1/2 Metres, <u>Journal IEE Part IIIA</u> , Vol. 93, 1946, Bacon, G.E.					
		Radar Antennas, <u>Bell Systems Technical Journal</u> , Volume 26, April, 1947, pages 219 to 317, Friis, H.T. and Lewis, W.D.					
DP		The Sydney University Cross-Type Radio Telescope, Proceedings of the IRE Australia, February, 1963, pages 156 to 165, Mills, B.Y., et al.					
		"Microwave Scanning Systems" published about 1985, pages 48 to 131					
DP		"Low Sidelobe and Tilted Beam Base-Station Antennas for Smaller-Cell Systems," published in or about 1989, Yamada & Kijima, NTT Radio Communication Systems Laboratories, pages 138 to 141					
		"Electrical Downtilt Through Beam-Steering versus Mechanical Downtilt," G. Wilson, published May 18, 1992, pages 1-4					
Examiner		/Dao Phan/		Date Considered 09/12/2006			
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Examiner Initial*		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
DP ↓ DP		3,032,759	05/01/62	R.M. Ashby	—	—	
		3,032,763	05/01/62	C.J. Sletten	—	—	
		3,969,729	07/13/78	Nemit	—	—	
		4,129,872	12/12/78	Toman	—	—	
		4,241,352	12/23/80	Alsbaugh et al.	—	—	
		4,427,984	01/24/84	Anderson	—	—	
		4,249,181	02/03/81	Lee	—	—	
	DP	4,532,518	07/30/85	Gaglione et al.	—	—	
FOREIGN PATENT DOCUMENTS							
DP		Document Number	Date	Country	Class	Subclass	Translation Yes No
DP ↓ DP		0 241 153 B1	14/10/87	EPO	—	—	X
		0 357 165 A2	07/03/90	EPO	—	—	X
		0 398 637 A2	22/11/90	EPO	—	—	X
		0 423 512 A2	24/04/91	EPO	—	—	Abstract Only
		DP	0 588 179 A1	23/03/94	EPO	—	—
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
DP ↓ DP		Mobile Telephone Panel Array (MTPA) Antenna: Field Adjustable Down tilt Models published in Australia on or about May 4, 1994					
		Mobile Telephone Panel Array (MTPA) Antenna: VARITILT Continuously Variable Electrical Down tilt Models (including specifications sheet) published in Australia on or about September 1994.					
DP ↓ DP		Supplementary European Search Report for Application No. EP 85 93 3674 dated January 9, 1999.					
		International Search Report for PCT/NZ 95/00108 mailed January 23, 1996.					
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Examiner Initial*		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate	
DP 		4,564,824	01/14/86	Boyd, Jr.	—	—		
		4,575,697	03/11/86	Rao et al.	—	—		
		4,652,867	03/24/87	Cresswell	—	—		
		4,714,930	12/22/87	Winter et al.	—	—		
		4,717,918	01/05/88	Finken	—	—		
		4,768,001	08/30/88	Chan-Son-Lint et al.	—	—		
		4,768,515	11/29/88	Wong et al.	—	—		
 DP		4,791,428	12/13/88	Anderson	—	—		
FOREIGN PATENT DOCUMENTS								
		Document Number	Date	Country	Class	Subclass	Translation Yes No	
DP  DP		0 595 726 A1	04/05/94	EPO	—	—	Abstract Only	
		0 618 639 A2	05/10/94	EPO	—	—	X	
		2 581 255	31/10/86	France	—	—	Abstract Only	
		1 314 693	26/04/73	UK	—	—	X	
		2 035 700 A	18/06/80	UK	—	—	X	
OTHER DOCUMENTS (Including Author, Title, Data, Pertinent Pages, Etc.)								
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Examiner Initial*		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
DP ↓ DP		4,804,899	12/14/89	Wurdack et al.	—	—	
		4,814,774	03/21/89	Herczfeld	—	—	
		4,821,596	04/18/89	Ektund	—	—	
		5,162,803	11/10/92	Chen	—	—	
		5,181,042	01/19/93	Kaise et al.	—	—	
		5,184,140	02/02/93	Harlu et al.	—	—	
		5,214,364	05/25/93	Perdue et al.	—	—	
	5,281,974	01/25/94	Kuramoto et al.	—	—		
FOREIGN PATENT DOCUMENTS							
		Document Number	Date	Country	Class	Subclass	Translation Yes No
DP ↓ DP		2 158 896 A	20/11/85	UK	—	—	X
		2 159 333 A	27/11/85	UK	—	—	X
		2 165 397 A	09/04/86	UK	—	—	X
		2 196 484 A	27/04/88	UK	—	—	X
		2 205 846 A	21/12/88	UK	—	—	X
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Examiner Initial*		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
↓ DP		5,440,318	08/08/95	Butland et al.	—	—	
		5,488,737	01/30/96	Harbin et al.	—	—	
		5,512,914	04/30/96	Hadzoglou et al.	—	—	
		5,551,060	08/27/96	Fujii et al.	—	—	
		5,801,600	09/01/98	Butland et al.	—	—	
		5,805,996	09/08/98	Salmela	—	—	
		5,818,385	10/06/98	Bartholomew	—	—	
DP		6,188,458 B1	03/06/01	Heinz et al.	—	—	
FOREIGN PATENT DOCUMENTS							
		Document Number	Date	Country	Class	Subclass	Translation Yes No
↓ DP		2 232 538 A	12/12/90	UK	—	—	X
		61-172411	04/08/88	Japan (See separate abstract)	—	—	Abstract Only
		1-120908	12/05/89	Japan (See separate abstract)	—	—	Abstract Only
		2-121504	09/05/90	Japan (See separate abstract)	—	—	Abstract Only
		2-174402	05/07/90	Japan (See separate abstract)	—	—	Abstract Only
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		Document Number	Date	Country	Class	Subclass	<div style="text-align: center;">Translation</div> <div style="display: flex; justify-content: space-between;"> Yes No </div>
DP		2-280306	30/11/80	Japan (See separate abstract.)	—	—	Abstract Only
		4-288407	12/10/82	Japan	—	—	Abstract Only
		5-121915	18/05/83	Japan	—	—	Abstract Only
		5-191129	30/07/83	Japan	—	—	Abstract Only
	DP	6-186927	15/07/84	Japan	—	—	Abstract Only
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							Yes	No
DP ↓ DP		264864	Filed: 04/11/94	New Zealand	—	—	X	
		272778	Filed: 15/08/95	New Zealand	—	—	X	
		WO 95/10862	20/04/95	PCT - New Zealand	—	—	X	
		WO 88/08621	03/11/88	PCT - US	—	—	X	
		3322-986-A	25/06/83	DE (Abstract Only)	—	—	X	
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